During the fiscal year 1903–4 Professor Reid kept a careful record of all earthquakes occurring in the United States about which any information could be obtained, either from the newspapers, the reports of the Weather Bureau and the Light-House Board, or by correspondence. Special information was collected regarding the earthquake of November 4, 1903, which was felt throughout a large section southeast of St. Louis, and also regarding that of March 21, 1904, which was felt in the extreme northeastern part of this country and in Nova Scotia.

Upon the invitation of the German Government, an international seismologic conference was held at Strassburg from July 24 to 28, 1904. The official delegates represented nineteen countries in various parts of the world, Professor Reid being the delegate from the United States. As a result of this conference the International Seismological Association was formed for the purpose of cooperative earthquake investigations, and it is expected that seismologic studies will be stimulated, especially in countries which have not heretofore been active in this field.

American observers and the correspondents of the MONTHLY WEATHER REVIEW are therefore invited to send reports of earthquakes to the Director of the U. S. Geological Survey for the use of Professor Reid. It is only in exceptional cases that such articles on this subject will hereafter be published in the MONTHLY WEATHER REVIEW, as we do not wish to duplicate his publications.

The first semiannual report by Professor Reid covering the months January to June, 1904, will be found in "Terrestrial Magnetism," June, 1905, Vol. X, pages 81–96. A fuller report will probably be published as a bulletin of the U. S. Geological Survey.

We have been requested to assist in distributing the following request for careful reports:

DESIDERATA RELATIVE TO EARTHQUAKES.

The U. S. Weather Bureau usually publishes in the monthly reports of the Climate and Crop Service, notices of earthquakes which have occurred in the respective States. The value of these reports would be greatly increased if more detail were given, especially with regard to the exact time of occurrence and the intensity of the shock.

When earthquakes are reported on the same day from various localities not very distant from each other, it may happen that they refer to the same disturbance or to different disturbances. If the exact times are recorded any uncertainty can, in general, be removed. In the compilation of general lists of earthquakes for all parts of the world, it is convenient to refer them all to some one standard of time, such as Greenwich mean time, but as the days in different parts of the world begin and end at different times, this is not possible unless the time of the disturbance is known and the local standard of time is mentioned.

Earthquakes of all intensities occur from those too small to be recorded even by the most delicate instruments to those of destructive violence. When the shock is unusually strong, much detail regarding it is apt to be given for that locality, but when it is only moderate, the record frequently states merely the fact that an earthquake was felt. Now, in studying earthquakes it is important to know the intensity of the wave of shock as it spreads outward over the globe, and it is, therefore, desirable that sufficient description of the local phenomena be given to allow the intensity of the shock to be expressed according to the Rossi-Forel scale, which is given below. This scale has been generally adopted by seismologists throughout the world.

ROSSI-FOREL SCALE.

I. Recorded by a single seismograph, or by some seismographs of the same pattern, but not by several seismographs of different kinds; the shock felt by an experienced observer.

II. Recorded by seismographs of different kinds; felt by a small number of persons at rest.

III. Felt by several persons at rest; strong enough for the duration or the direction to be appreciable.

IV. Felt by persons in motion; cracking of ceilings.

V. Felt generally by every one; ringing of some bells.

VI. General awakening of those asleep; general ringing of bells, stopping of clocks; visible disturbance of trees and shrubs; some startled persons leaving their dwellings.

VII. Fall of plaster; ringing of church bells; general panic; little or no damage to buildings.

VIII. Fall of chimneys; cracks in the walls of buildings.

IX. Partial or total destruction of some buildings.

X. Great disasters; ruins; disturbance of strata; fissures in the earth's crust; rock falls from mountains.

It is best for the individual local observers to describe as accurately as possible what the earthquake did and leave it to the student who compares all records to assign the scale values to the local intensities.

THE LIBBEY CIRCLE IN SEISMOLOGY.

In the annual report for 1904, part 1, page 44, of the British Association for the Advancement of Science, Professor Milne in his report on earthquakes refers to the "Libbey Circle" and enters it upon an accompanying chart. Undoubtedly Professor Milne refers back to the meeting of the British Association for the Advancement of Science in 1902 when Prof. William Libbey, of Princeton, was present and spoke at length upon what Professor Guyot was in the habit of calling the great zone of fracture about the globe.

This circle is a small circle of the globe having Bering Strait as a center or pole and a radius of about 80° of arc. It is found that a circle thus drawn cuts through all the depressed lands in the central portion of the globe.

Professor Guyot often referred to this region as the zone of fracture and one that contained five-sixths of the active volcanoes of the world. It stands in clear contrast with the great circle of volcanoes surrounding the Pacific basin. It is, in fact, a zone because a great circle will not exactly fit all these depressions, but a zone with slightly irregular borders and with this circle as an approximate median line will do so. Professor Guyot never referred to this zone as in any way connected with seismological phenomena, but Professor Libbey spoke of this part of the subject at the British Association for the Advancement of Science in 1902 at considerable length, and reported that he had a large amount of as yet unpublished evidence of very great seismic activity within this zone.

THE PICHE EVAPOROMETER.

In answer to some inquiries as to the coefficient to be used in the reduction of observations with the Piche evaporometer, the Editor would refer inquirers to the article by Prof. Thomas Russell in the MONTHLY WEATHER REVIEW for September, 1888. As this number of the REVIEW is now entirely out of print the following summary of Professor Russell's results may be welcome.

The Piche evaporometer (see fig. 1) consists of a glass tube about nine inches long and 0.4 inch internal diameter. The top is hermetically sealed; the lower end is closed by a disk of metal and a spring which holds a disk of porous paper in place. The tube being filled with water keeps the paper disk wet with a continuous supply of water to replace whatever is evaporated. The amount of evaporation is measured by the fall of the water in the tube. The supply should be so generous that the small disk of paper is kept wet even in the driest winds.

Twenty-five of these instruments were procured for the Signal Service in 1888; most of them were carefully compared with each other by weighing and with two standard shallow dishes of water from whose surfaces evaporation took place freely. The evaporating surface of the wet paper averaged 11.2 square centimeters or 1.182 square inches. The evapora-